
Original Article

Improving corporate performance by enhancing team dynamics at the board level

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ABSTRACT Board performance research conducted over the last 50 years has focused on individual directors' economically-motivated behaviors and outcomes, and has generated inconsistent and disappointing results. Most research does not consider the board as a team, despite recent calls for a focus on collective board processes and behaviors. A recent survey revealed that 90 per cent of directors rate their individual performance as very effective but only 30 per cent rate overall board performance at an equivalent level, exposing a gap that needs to be addressed. The discrepancy between individual and team performance effectiveness was the focus of this research, based on original data from 182 directors and their assessment of their board's dynamic, team task performance efficacy, team potency and the impact of their activities, as a board, on firm profitability. Our findings show that director experience, social network and cultural intelligence quotient, as well as their ability to achieve high levels of team interaction – thereby lowering information asymmetry – have a significant impact on corporate profitability. Our study demonstrates that the impact of board functioning as a team is an eight times greater predictor of corporate performance than individual director demographics. We found that this team dynamic as well as team potency has a positive impact on profitability, while the focus on compliance-oriented tasks has a significantly negative effect on profitability. The insights of this study should help boards and their advisors better focus their efforts to improve team dynamic, optimize board interactions and refocus their attention on value-creating activities. We also believe that improving board team dynamics will have an unintended consequence of bringing a level of individual and team satisfaction back to the boardroom.

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INTRODUCTION

Board performance has been at the center of modern corporate governance research for more than two decades, with the majority of inquiry relying exclusively on economic

theories generating inconsistent and disappointing results (Bainbridge, 2010; Huse *et al.*, 2011). Equally unsatisfactory is that most research has centered on the individual director as the unit of analysis instead of the board as a team, despite calls – since the early 2000s – for a focus on collective board processes and behaviors to understand and predict board performance quality (Leblanc and Gillies, 2003; Letendre, 2004; Huse, 2005; Pye and Pettigrew, 2005). The contrast between the individual and team level unit of analysis is strikingly clear when considering information from board members revealing that 90 per cent consider themselves to be ‘very effective’ but only 30 per cent rate the overall board’s performance as very effective in addressing their most important and strategic initiatives¹ (Heidrick and Struggles, 2010). This is a disturbing revelation as shareholders and other stakeholders mistakenly believe that boards are comprised of successful, experienced and responsible executives *working as a team* to effectively carry out their legal and ethical obligation to represent and protect shareholder interests (Brennan, 2006), but, instead, we learn that less than half the time boards are assessing their collective performance as effective (Heidrick and Struggles, 2010). Poor board governance is one of the causes of shareholder activism (Smith, 1996; Gillan and Starks, 2007; Bebchuk and Weisbach, 2010). Much of the recent academic literature on boards has proffered the recommendation that directors should work as a team to be able to produce better board outcomes (Cohen and Bailey, 1997; Forbes and Milliken (F&M), 1999; Sonnenfeld, 2002; Finkelstein and Mooney, 2003; Leblanc and Gillies, 2003; Letendre, 2004; Pye and Pettigrew, 2005; Zona and Zattoni, 2007; Conger and Lawler, 2009; Payne *et al.*, 2009; Van Ees *et al.*, 2009; Huse *et al.*, 2011; Vandewaerde *et al.*, 2011; Lorsch, 2012), but these studies are based on theoretical assumptions.

Despite our exhaustive search, we could not find any empirical academic studies that examined actual data on boards working as teams – measuring director’s assessment of teamwork,

team productivity and team potency (TP). This research, we believe, is the first of its kind to analyze collective board performance rather than at the individual level. Responses to an original and comprehensive team-focused survey from 182 directors and publicly available information were used to better understand team dynamics, team task performance (TTP) and the collective board’s impact on corporate profitability. Our research explores how a board’s team characteristics meaningfully impact corporate profitability. We contribute to existing literature in several ways. First, we explore whether board dynamics are in fact an ‘intervening process’, as posited by many scholars, in the value-creation chain from director characteristics to firm-level performance. Second, we reframe board dynamics as the way teams interact, captured by the Team Learning and Development Inventory (TLI) (Lingham, 2005, 2009). Third, we introduce a new behaviorally-based measure to predict the directors’ potential contribution to board dynamics by determining their cultural intelligence quotient (CQ) (Earley and Mosakowski, 2004). Fourth, we explore the impact that TP and TTP have on corporate profitability.

LITERATURE REVIEW

The inquiry into the impact that boards of directors have on their organizations began over 150 years ago (Smith, 1863) and continues to be studied today (Minichilli *et al.*, 2012). Hundreds of articles have been written to try to capture the ‘mystery’ of the boardroom, directors and their impact on the successful management of the firm (Zahra and Pearce, 1989; Gabriellson and Huse, 2004; Finegold *et al.*, 2007; Hambrick *et al.*, 2008; Huse *et al.*, 2011). When considering the perspectives employed in these inquiries, it is useful to review the different streams of literature on this topic – economic, behavioral, individual-based and team-based frameworks – from which to observe and consider board characteristics and outcomes.



The prevalent framework used to interpret and predict the motivations and behaviors of individual directors has been based in economic theories. Scholars have employed agency theory (Eisenhardt, 1989; Boyd, 1990; Donaldson and Davis, 1991; Bathala and Rao, 1995), stewardship theory (Donaldson and Davis, 1991, Muth and Donaldson, 1998) and resource dependence theory (Casciaro and Piskorski, 2005; Haynes and Hillman, 2010) as the lens through which to observe, interpret and predict director behaviors, in their activities to optimize the financial return to shareholders. Despite these theories having been criticized as too narrow when considered as a sole theoretical framework (Eisenhardt, 1989), there is value in understanding that directors do provide important monitoring functions in an attempt to resolve, or at least mitigate, agency conflicts between agents and principals (Bathala and Rao, 1995).

Another stream of research – the newest in the portfolio of approaches – is the use of behavioral theories to explain board actions and outcomes (Hambrick *et al*, 2008; Van Ees *et al*, 2009; Huse *et al*, 2011). These theories include some new and some old behavioral theories including identity theory (Ashforth and Mael, 1989), theory of planned behavior and reasoned action (Madden *et al*, 1992; Ajzen, 2002), and social networking theory (Granovetter, 1973), as well as various theories of the firm that have recently been applied to board behavior (Cyert and March, 1963; Grant, 1996; Rumelt, 1997; Slater, 1997) in framing and interpreting director actions and their impact on firm outcomes. Despite diverse approaches and underlying theories employed by scholars, there is consensus that observing boards, understanding their behavior and predicting the impact on corporate outcomes is virtually impossible because of the difficulty in gaining access to actual board processes (Pettigrew, 1992; Daily *et al*, 2003). In addition to reviewing the panoply of theoretical frameworks, we observe that the prevalent unit of analysis is the individual director, and that most economic and legal theory relies on the actions

of individuals in expressing the behavioral tenets of theory. However, there have been calls from scholars to consider the board as a collective unit or the ‘board as team’ as the unit of analysis to try to better understand the impact of the board on corporate outcomes. This is reflected in the surge of recent work on teamwork in contexts as an empirical inquiry of the sparsely-researched link between board dynamics and governance (Huse *et al*, 2011). Confounding the lack of clarity on board-level antecedent relationships to firm-level outcomes is the recognition that most research conducted employs secondary-source data or ‘easily available data and the use of standardized methods’ (Gabrielsson and Huse, 2004), preempting efforts to gather primary data on the subject. Of the hundreds of articles written about board governance since 1990, only 8 per cent address director performance from a behavioral perspective (Huse *et al*, 2011), and of these only a few have produced original survey data for their quantitative analyses (Minichilli *et al*, 2012). For all these reasons – the preponderance of theoretical frameworks, difficulty in accessing primary data and defining the most appropriate unit of analysis – scholars refer to the board as a ‘black box’ (Pettigrew and McNulty, 1995; Leblanc and Schwartz, 2007; Neill and Dulewicz, 2010) and scholarly works have not yet succeeded in lifting the shroud of boardroom mystery.

THEORY AND HYPOTHESES

We begin our research with the question: How do board team characteristics and team interaction meaningfully impact corporate profitability? Our research question is informed in part by prior research conducted by other scholars, and in part by our own qualitative research on board directors’ behaviors, based on their lived experiences. Our prior research demonstrated that there are distinct behavioral patterns both inside and outside the boardroom among directors. These behavioral norms, specifically in the ways directors coordinated information sharing, participated in deliberations and recruited new

directors, practices, were central to our quantitative investigation of ‘teamwork’ at the board level (Charas and Perelli, 2013).

In deconstructing boards and the hypothesized impact on corporate performance, we reference the F&M (1999) paradigm-shifting model (see Figure 1). We specifically focus on the impact of the processes or the *relationship-dynamic* on board-level and firm-level outcomes. F&M’s (1999) fundamental theory articulates that board processes should be explored for three reasons: ‘influence of board demography on firm performance ... [is] complex and indirect’, ‘beliefs and behaviors [cannot] be inferred reliably from demographic variables alone’ and the ‘study of process constructs has the potential to expand and refine our understanding of group dynamics’ (F&M, 1999). Their work ushered in a new era of research – to consider boards in an economic-behavioral context (Gabrielsson and Huse, 2004; Hambrick *et al*, 2008; Huse *et al*, 2011).

In addition, their work marks a significant moment in academic research: it signals the departure from an exclusive reliance on economic theory and director demographics to predict board outcomes, and a move to examining the actual behaviors of board directors framed by both behavioral and economic theory. They propose that boardroom aspects should be examined at four intervals – director characteristics, board processes, board-level outcomes and firm-level outcomes (F&M, 1999). Their theory, combines different units of analyses – individuals, groups and firm-level constructs in the same model – another departure from the traditional approach of studying boards.

The F&M model uses board demography and the presence of knowledge and skills as its indicator of board characteristics. In our model, we update these constructs to represent the vital input from directors using professional capital (PC) and social capital (SC), or what is referred to combined as ‘board capital’ (Hillman and

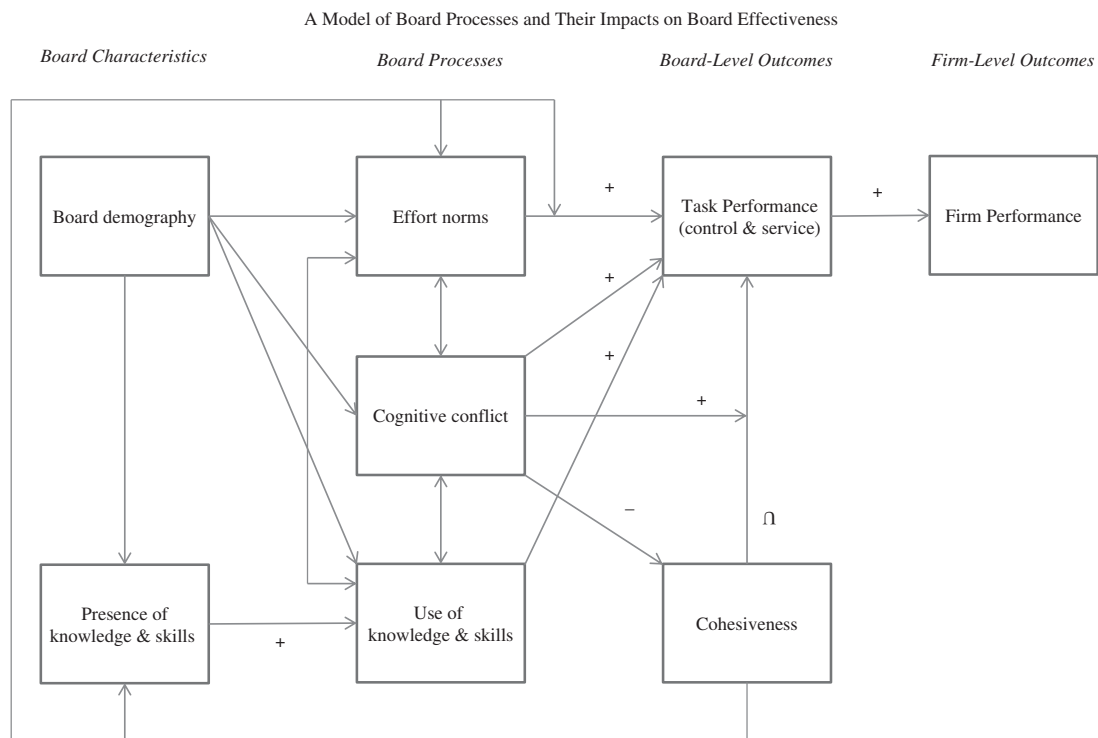


Figure 1: F&M (1999) model.

Dalziel, 2003). PC and SC, in their ‘resource provision function’ (Haynes and Hillman, 2010), represent the human and SC of the board and serve as a proxy for the director’s ability to provide resources to the board (Hillman and Dalziel, 2003). PC is a measure of the knowledge, depth of expertise and degree of experience in management and on boards that the directors bring with them to their service role on the board (Haynes and Hillman, 2010). SC is a measure of the breadth of the network of connections the director has among other board directors of both public and private organizations (Haynes and Hillman, 2010). On the basis of resource dependence theory, depth of board capital will have an impact on firm-level outcomes, or, in our study, profitability, because of the perceived value and resources the director brings to the board. Resource dependence theory (in the economic school) describes the value relationship between directors and company stakeholders, explaining that directors contribute value to the organization through the resources they bring in the form of ‘legitimacy, advice and counsel, links to other organizations, etc’ (Hillman and Dalziel, 2003; Nicholson and Kiel, 2004). Our model combines both economic and behavioral theories, as each on its own is not sufficient to explain the impact of the board on firm-level outcomes. We therefore hypothesize that:

Hypothesis 1a: Higher levels of Professional capital (PC) increase profitability.

Hypothesis 1b: Higher levels of Social capital (SC) increase profitability.

In our work, we assume that boards are teams and should be studied through this theoretical framework, despite this conceptualization being ‘ignored or even denied in past board research’ (Vandewaerde *et al*, 2012). Boards can be considered teams as they are ‘groups of interdependent individuals that can self-regulate their behavior on relatively whole tasks. [They have] 1) face to face interaction;

2) are employees with interrelated tasks responsible for making a product or providing a service; and 3) [exercise] discretion over decisions such as task assignments, methods for carrying out the work and scheduling of activities’ (Cohen and Ledford, 1994). Therefore, we consider the board of directors a ‘team’ in the same way others have considered and studied boards at the theoretical level (F&M, 1999; Conger and Lawler, 2009; Vandewaerde *et al*, 2011; Vandewaerde *et al*, 2012). This distinction that boards are teams is germane when considering the next level of inquiry in F&M’s (1999) model: board processes. They identify effort norms, cognitive conflict and the use of skills and knowledge as the ‘intervening process’. We assume that the referenced intervening process is the board’s dynamic. F&M (1999) state that the ‘the study of process constructs has the potential to expand and refine our understanding of group dynamics ... the identification of independently predictive processes represents an important complement to knowledge about the direct or indirect effects of board demography’ (F&M, 1999). According to Curry *et al* (2012), team dynamics is defined as being able to deal with differences, trusting the other, creating a meaningful context, handling conflict and tension, and enacting effective leadership roles within the team (Curry *et al*, 2012). McGrath *et al* (2000) define it as ‘team members engaged in tasks using tools and resources’ to satisfy two team objectives – to complete group projects and to fulfill member needs (McGrath *et al*, 2000). Therefore, we measure dynamics to determine the degree to which team members interact successfully to achieve the team’s and their personal objectives by capturing how the team operates through these interactions. We measure the degree and quality of a board’s dynamic or interaction using the TLI (Lingham, 2009). Specifically, the scale was developed to capture the ‘socio-psychological’ aspects of teams, as it was observed that great team experiences are defined by team member interaction with regard to ‘... trust, relating to others, safety and other

social-emotional aspects of team interaction Most of these aspects of team interaction are embedded in the lived experience of a team based on the quality of their interaction along the task-relational continuum' (Lingham, 2009). In our model, we refer to the dynamics of a team as team interaction quality (TIQ). We hypothesize, like F&M, that certain board characteristics, namely, PC of the director, will have an impact on intervening processes. We believe that the quality of relevant information, industry and management experience represented by a director's PC will contribute to the richness of the exchange and quality of interaction. According to Hollenbeck *et al* (1998), 'the degree to which each team member has all the information necessary to perform their role in the team process ... is the most critical variable' in team success (Hollenbeck *et al*, 1998). Therefore, we posit that:

Hypothesis 2: Higher levels of Professional Capital (PC) increase team interaction quality (TIQ).

Perhaps one of the most important aspects of any successful team is the exchange of information. It is incumbent on the director to be able to share information to optimize the decision-making process, and it is the team member's (in our case, the director's) responsibility to behave in a manner that fosters the exchange of information and facilitates effective decision making. Effective exchange of information is critical in decision making, and we posit that directors have an obligation to be engaged in and contribute to the exchange of information. When information is not effectively exchanged, information asymmetry occurs – 'different people know different things ... and information asymmetries arise between those who hold that information and those who could potentially make better decisions if they had it' (Connelly *et al*, 2011). The ability of the directors to understand each other is contingent upon each individual's sensitivity to both spoken and tacit or nuanced communication. The tenets of this theory, and its economic implications, 'lies in

ascribing costs to information acquisition processes that resolve information asymmetries in a wide range of economic and social phenomena' (Connelly *et al*, 2011). The minimization of these information acquisition costs in the boardroom may result in higher levels of decision making, task performance and ultimately profitability. Therefore, dynamics is a measure of the directors' ability to communicate information to one another, reducing the economically detrimental impact of information asymmetry – as observed, 'information asymmetry is likely to play an important role in determining whether boards will be effective in carrying out their duties' (Rutherford, 2007). We again update F&M's model by adding an aspect that has not yet been measured at the director level – CQ. CQ is a measure of the individual director's 'ability to make sense of unfamiliar contexts and then blend in' (Earley and Mosakowski, 2004). CQ measures an individual's ability to 'distinguish behaviors produced by the culture in question from behaviors that are peculiar to particular individuals and those found in all human beings' (Earley and Mosakowski, 2004). We measured CQ as an indicator of the director's ability to conform with and be successful in the social norms indicative of each board (Charas, 2012), as well as an indicator of the director's ability to receive and transmit 'signals' (Bliege Bird and Smith, 2005). According to Ang and Van Dyne (2008), 'CQ has relevance to groups, teams, [and] organization' (Ang and Van Dyne, 2008), and Triandis (2006) adds that individuals with high CQ may be more effective in adapting to organization dynamics as 'people who are culturally intelligent are also more flexible than the average person and thus more able to adjust to different organizational environments' (Triandis, 2006). Most recently, researchers have identified that it is the director's ability to understand the nuances of relationships and social norms in the boardroom that distinguishes high- from low-performing boards (Huse, 1998; Leblanc and Gillies, 2005), and CQ is a direct measure of this – the ability to perceive and adjust one's

behavior to different cultural settings. The value that directors add to the organization is not the knowledge that resides in them (resource providing), but their ability to share this knowledge for the benefit of the firm (knowledge application) in a dynamic setting. Therefore, our third set of hypotheses relate to the ability of the director to understand and adapt appropriately to different cultural settings, optimizing their ability to communicate effectively and impact the dynamic in the boardroom (TIQ), as well as the board's ability to accomplish tasks. As indicated above, we consider TIQ as the measure of the quality of the intervening processes. Several researchers have investigated the phenomena of board dynamics. Erakovic and Overall (2010) describe dynamics as 'more than a summation of individual contributions where ... different people working together in a board-level environment genuinely adds value to the organization'. According to Huse (1998), 'trust and emotion play ... an important part in the boards' activities'. He adds that dynamic is contingent on the feelings of the directors about their fellow directors' 'competence, capacity, timing, even their integrity, their good intentions or their reliability' (Huse, 1998). F&M (1999) state that board dynamics are heavily dependent on social-psychological processes, especially related to group participation and interaction, information exchange and dialog (F&M, 1999). Another point of view on the importance of dynamics in the boardroom comes from Letendre (2004): '... the quality of the interactions among the participants – or "boardroom dynamics" – is a crucial variable in effective decision-making and achieving other desired meeting outcomes'. The question of board team dynamics and board task performance was examined in our study to try to reveal the contents of the 'black box' (Gabrielsson and Huse, 2004; Leblanc and Schwartz, 2007) and the direct and indirect impact this has on corporate profitability. In our study, task performance was operationalized through collecting information on the skills directors believe the board applies in generating cognitive outcomes, the freedom directors have

to express innovation, and directors' attention to compliance and risk management issues. Therefore, we hypothesize on the relationship between director characteristics and board-level outputs:

Hypothesis 3a: Higher levels of cultural intelligence quotient (CQ) increase Team Interaction Quality (TIQ).

Hypothesis 3b: Higher levels of cultural intelligence quotient (CQ) increase Team Task Performance (TTP).

The most recent conceptual framework in the stream of board research has been the use of behavioral theory – the 'interactions and behavioral processes among and between actors in and around the boardroom' (Van Ees *et al*, 2009). Van Ees *et al* (2009) further suggest that studying boards from a behavioral perspective adds more value than using the traditional economic frameworks, as using behavioral theory brings us closer to what is actually happening in the boardroom, and this is more actionable for practitioners. In fact, beyond the simple exchange of information, 'the focus on how boards add value has increased the relative importance of practices that facilitate boards working together well as a group' (Payne *et al*, 2009). Perhaps the most influential of the scholars contributing to this stream of literature are Huse and colleagues in their pronouncement that to unravel the mystery of the board we should '... emphasize how the board, [works] as a team together and rather than only as individual board members ... [and how they] can effectively coordinate firm activities and utilize different resources to create value. As no board member is likely to possess the full complement of information and knowledge necessary to achieve desired goals, then working as a team permits greater productivity than can be achieved by individual efforts' (Gabrielsson *et al*, 2007). To best observe the behaviors that represent this concept, we need to understand different aspects of board performance ranging from how directors perform as a team, to how well directors are able to respond

to contextual and cultural differences (Earley and Mosakowski, 2004) that define each board environment (board culture), to the intervening processes or the dynamic of the relationships of the board directors (Minichilli *et al*, 2012) and how they impact resulting board-level outcomes of TP and TTP. TP is a measure of a team's 'collective perceived capability of working together to achieve tasks' (Collins and Parker, 2010). Collins and Parker (2010) focused on distinguishing the different drivers of team performance, examining elements of potency, processes and outcomes. TP as identified, is an important board-level outcome, as teams with a 'strong belief in their capabilities set higher goals, develop strategies to achieve their goals, and persist in the face of setbacks' (Collins and Parker, 2010). They also found that 'the broader bandwidth of team potency may be most predictive when a team does not obtain realistic feedback' (Collins and Parker, 2010), and given that boards are special teams that meet infrequently and receive little feedback, the use of potency was appropriate. In a study that focused on the importance of TP compared with other antecedents of TTP, potency was the strongest predictor of team performance (Campion *et al*, 1993; Champion *et al*, 1996). According to Ilgen *et al* (2005), effective teams are characterized by members *believing* that they are competent enough to accomplish their task (potency), provide an environment of psychological safety, demonstrate a desire to work and stay together (bonding and solidarity), are able to adapt to changing situations, and are able to learn. These team characteristics set the environment for the important intervening processes or board dynamic that is 'complex and indirect' (F&M, 1999) and thus crucial in generating vital and effective board-level outcomes. Because CQ is a measure of how well an individual can adapt to different social norms in group settings and TP is a measure of the team's psychological profile, we posit that it is the quality of the interaction of directors that enhances their ability to adapt to different

cultures in generating a shared mental model of TP. Because PC is a measure of the director's experience and expertise, the ability to share this information effectively will lead to a higher level of belief that the team can accomplish their objectives. It is through their ability to achieve high levels of interaction and appropriately share their experience and expertise that their collective belief in their ability to achieve goals can be manifested in TP. We therefore hypothesize the following relationships between board characteristics, TIQ and TP:

Hypothesis 4a: Team interaction quality (TIQ) mediates the relationship between cultural intelligence quotient (CQ) and team potency (TP).

Hypothesis 4b: Team interaction quality (TIQ) mediates the relationship between professional capital (PC) and team potency (TP).

As described above, we would expect a relationship between the knowledge resources the director brings to the board and their ability to perform effectively in a team because of a heightened ability to communicate. When TIQ is high, we would expect to see this resulting in higher levels of TTP. O'Reilly III *et al* (1998) observed that because boards are charged with complex, interactive tasks, the degree of TIQ – or as they characterize it, 'interpersonal attraction' – will have an impact on how well those tasks are performed. Because in a team it is the collective actions of each individual that contribute to the ability to achieve task completion, a high level of information exchange, group decision making and shared mental models are required to achieve the TTP goals. It is through the 'intervening processes' or dynamics that teams are able to generate outcomes. We therefore hypothesize that:

Hypothesis 5a: Team interaction quality (TIQ) mediates the relationship between cultural intelligence quotient (CQ) and team task performance (TTP).

Hypothesis 5b: Team interaction quality (TIQ) mediates the relationship between professional capital (PC) and team task performance (TTP).

Again, CQ measures the ability of a director to appropriately and effectively understand the dynamic of the team, and contribute their knowledge and skills to enabling the team to achieve their goals. Knowledge-based theory of the firm and team interaction theory would support our prediction of a mediated relationship between CQ and firm profitability, and we hypothesize that:

Hypothesis 6: Team interaction quality (TIQ) mediates the relationship between cultural intelligence quotient (CQ) and profitability.

Measuring TP is important because ‘teams with a strong belief in their capabilities set higher goals, develop strategies to achieve their goals, and persist in the face of setbacks’ (Collins and Parker, 2010). Groups with high levels of potency are more likely to achieve success in team goals. Given the ultimate goal of the board is to represent the interests of the shareholders by guiding the organization to financial success, for our study we selected relative profitability performance as the indicator of corporate success, and therefore board success. We hypothesize the following relationship:

Hypothesis 7: Team potency (TP) mediates the relationship between team interaction quality (TIQ) and profitability.

The literature of late is rife with references to the relationship between TTP and financial performance, and organizations are ‘increasingly focusing on teams to increase competitive advantage’ (Hartenian, 2002). Teams have become the focus of businesses interested in improving their productivity and profitability, as collaboration, continuous learning and shared access to information have been shown to generate value in organizations by improving productivity, enhancing creativity, increasing

response times and improving decision making (Lawler *et al.*, 1995). Several scholars have suggested that there is a direct and causal relationship between board task performance and corporate financial performance (Brennan, 2006; Spellman and Watson, 2009; Adut *et al.*, 2011): companies with active boards produce higher levels of investor returns and economic value creation than those with passive boards (Millstein and MacAvoy, 1998; Karamanou and Vafeas, 2005; Brennan, 2006). Our aim is to understand this relationship further and hypothesize the following:

Hypothesis 8a: Team task performance (TTP) mediates the relationship between team interaction quality (TIQ) and profitability.

Hypothesis 8b: Team task performance (TTP) mediates the relationship between cultural intelligence quotient (CQ) and profitability.

These hypotheses and the results are represented in Figure 2. Note that consistent with the F&M model we have distinguished the four levels of focus – board characteristics, board processes, board-level outcomes and firm-level outcomes.

RESEARCH DESIGN

To understand the influence of the identified factors on relative profitability performance of public and private for-profit organizations, we conducted a quantitative study using a combination of survey data, proprietary data from third-party sources and public domain information. We followed a strict psychometric survey methodology that gathered individual responses addressing selected constructs. By using a blended quantitative approach using multiple sources of data, we reduced the potentially high level of method and social desirability bias in this type of study. The following section describes the method we used for the development of our survey instrument (including operationalization) and data collection for our study. A summary of the constructs operationalized in

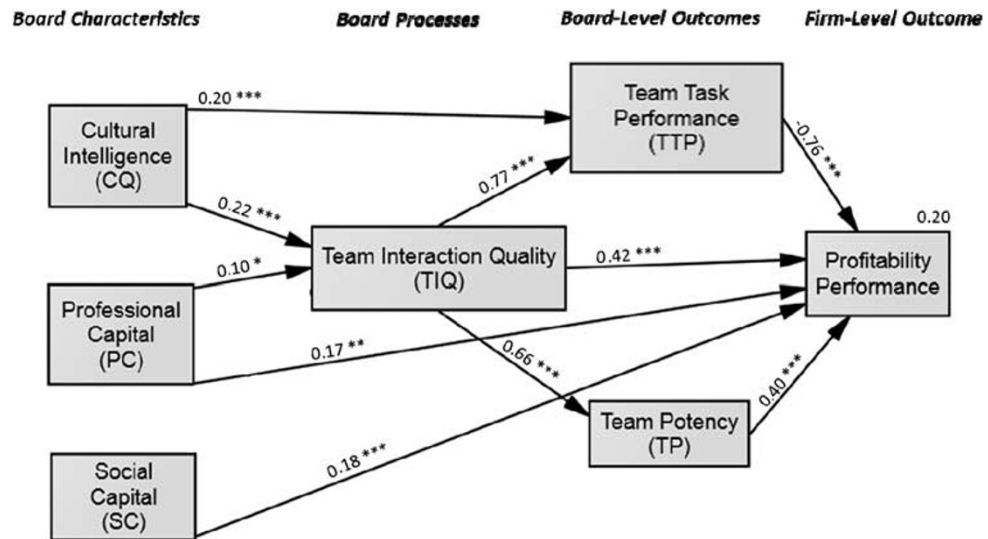


Figure 2: Hypothesized model and results. * $P < 0.10$; ** $P < 0.05$; *** $P < 0.01$.

our study and the sources of scales used can be found in Table 1. These constructs are discussed in detail below.

Board characteristics – Independent variables

Board director PC and SC measures were operationalized by accessing three sources of information: public domain information about director professional profiles; private third-party information about director social capital (BoardEx); and by collecting primary information from directors themselves about their level of cultural intelligence.

Professional Capital: To best understand the types of skills/competencies and relative importance directors place on PC, we referenced prior research conducted on directors of public companies (Charas, 2012). Our prior research indicated that board directors are primarily recruited for their knowledge, experience and social network. In our study, we define knowledge and experience as PC, which was represented by a score calculated by standardizing and then weighting attributes represented in Table 2.

Social Capital: SC was a raw score collected from a relationship capital management database (BoardEX). This raw score represents the number of connections each director has in a database of over 500 000 directors of both public and private organizations. SC raw score was converted to a standardized value.

Cultural Intelligence Quotient: (CQ) measures metacognitive, cognitive, motivational and behavioral aspects of adapting to different cultures. For our research, we measured only three aspects of director’s behavioral characteristics including metacognitive, motivational and behavioral and excluded cognitive as this aspect is not relevant to board tasks. Metacognitive aspects capture ‘the mental processes that individuals use to acquire and understand cultural knowledge, including knowledge of and control over individual thought processes.’ Motivational aspects measure the ‘capacity to direct attention and energy toward learning about and functioning in situations characterized by cultural differences.’ Behavioral aspects describe the ‘capability to exhibit appropriate verbal and nonverbal actions when interacting with people from different cultures’ (Ang and Van Dyne, 2008). The most critical aspect of CQ is the behavioral aspect as

Table 1: Summary of constructs described in research design section

Type of variable/ construct name	Definition	Number of items	Source of scale/information
Independent: PC	The skills, competencies and experience of directors represented by years of industry experience, number of boards served, current executive management role, cumulative years of board experience and highest level of education achieved	5	Public domain information and BoardEx
Independent: SC	A numeric value indicating the degree to which the director is 'connected' to over 500 000 other directors in the BoardEx database. A measure of the breadth of their social network and therefore their social capital	1	BoardEx
Independent: CQ	A numeric measure of the director's ability to adapt to and behave appropriately with regard to the cultural and social norm characteristics of each board	14	CQS – Self Report (Ang and Van Dyne, 2008) Likert: 1–7
Mediator: TIQ	A measure of the health of the dynamic of the team, as indicated by the ability of the team to create a 'safe and supportive environment, embracing and respect[ing] differences, developing strong trusting relationships, generating learning and getting tasks done effectively'	30	TLI, Lingham (2009) Likert: 1–5
Mediator: TTP	Three factors comprise TTP: Skills: the degree to which directors have adequate training and are competent and exhibit flexibility in the use of their skills; Innovation: a measure of the degree to which directors seek approaches to improve their systems of work; Compliance quality: a measure of the degree to which directors understand, comply with and are concerned with compliance and administrative requirements and standards set by the board	15	Team Effectiveness Questionnaire (Bateman <i>et al</i> , 2002) Likert: 1–5
Mediator: TP	A psychological measure of the team's collective perceived capability of working together to achieve tasks	8	Collins and Parker (2010) Likert: 1–5
Dependent: Profitability performance	A relative measure of the organization's performance compared with an index of size-adjusted industry average profitability	2	Public domain information (S&P, Hoovers and so on)

verbal and nonverbal behavior 'are the most salient features of social interaction' (Ang and Van Dyne, 2008). Overall, CQ is a measure of the director's ability to adapt to and behave appropriately with regard to the cultural and social norm characteristics of each board. Using

the Cultural Intelligence Quotient Scale (CQS) – Self Report (Ang and Van Dyne, 2008) employing a Likert scale of 1 to 7, a unique CQ value was calculated for each director. An exploratory factor analysis (EFA) for all constructs using primary data was conducted,

Table 2: Development of the PC construct

<i>Aspect</i>	<i>Weight (in percentage)</i>
Years of industry experience	30
Number of boards served	30
Current executive management role (CEO, direct report to CEO, other corporate level, outside advisor)	20
Cumulative number of years on boards	10
Highest level of education achieved	10

using principal component analysis as the extraction method and Promax with Kaiser normalization as the rotation method, converging in five iterations. We believe that the scale for CQ was appropriately operationalized for our participants, with Cronbach’s $\alpha = 0.93$. The questions used to assess CQ are provided in Table 3.

Board processes – The mediators

The mediator for board-level outcomes is TIQ or what F&M (1999) refer to as the ‘dynamic’ or the measure of boardroom ‘intervening processes’. To capture the director’s perception of TIQ, we employed the TLI questionnaire developed by Lingham (2009). This questionnaire focuses on the crux of team interaction by assessing the extent to which the board is currently creating a ‘safe and supportive environment, embracing and respect[ing] differences, developing strong trusting relationships, generating learning and getting tasks done effectively’ (Lingham *et al*, 2009). The 30 items in this scale measure interaction among team members on 10 behavioral attributes: engagement, active listening, individuality, relationality, solidarity, understanding, action, planning, power and influence, and openness. Board members responded to team-level questions on a 5-point Likert scale. As the instrument is a proprietary product of Interactive Science², the raw data were provided to this organization and they in turn provided a single score representing the level of TIQ per participant, and used to represent the

mediator of board processes (or team dynamic) in our analysis. Because of the proprietary nature of the diagnostic tool, we are not able to provide the scale here. A single score was used for each participant, and therefore we did not need to perform any reliability or validity tests.

Board-level outcomes

Board-level outcomes are measured by two aspects – the degree to which boards are effective in achieving tasks (TTP) and the level of perceived TP. Given that a board’s primary output is cognitive in nature, *TTP* was measured in relation to ‘service delivery’ (Bateman *et al*, 2002), and we attempted to capture aspects of TTP and compliance quality levels. For our analyses, three aspects were selected as appropriate to capture the information deemed most indicative of TTP and confirmed by our prior qualitative research, namely, skills, innovation and compliance quality (Charas and Perelli, 2013). Skills measured the degree to which directors have adequate training and are competent to do ‘board work’, as well as a measure of the flexibility in the use of their skills (Bateman *et al*, 2002). Innovation measured the degree to which directors seek approaches to improve their systems of work (Bateman *et al*, 2002). Compliance quality measured the degree to which directors understand, comply and are concerned with compliance and administrative requirements and standards set by the board (Bateman *et al*, 2002). Compliance quality



Table 3: Survey questions

TTP and TP questions

The membership of the board can be readily identified
 There is a common sense of purpose for directors
 Directors are clear about their roles on the board
 There is effective communication among directors
 Individuals are valued as board directors
 The board is highly valued by other parts of the organization
 Directors feel proud to be a member of the board
 Morale among directors is high
 There is effective and appropriate leadership on the board
 All directors perform to the best of their ability on the board
 Directors have a high level of stakeholder awareness
 The board has clearly defined their stakeholders
 There are clearly defined standards for working practices for the directors
 Standards are monitored on a regular basis
 Feedback on the monitoring of standards is given to directors on a regular basis
 There are measurable standards for outcomes that are monitored
 Directors are adequately trained and are competent to perform the professional aspects of their jobs
 Directors are adequately trained in the administrative systems and procedures
 Director training and development needs are systematically identified
 Resources are identified and made available for training needs
 There is a formal system in place to identify director development and training needs
 Directors are encouraged to try new work methods or introduce new ideas
 Directors are involved from the outset in new developments related to the company
 Innovation is rewarded on the board
 Problems related to the company's business are quickly identified
 Once identified, the board is quick to address the problems
 Problem solving is seen as an opportunity for learning and growth
 The board believes it can become unusually good at producing high-quality work
 The board expects to be known as a high-performing team
 We feel we can solve any problem the board encounters
 The board has confidence in itself
 The board believes it will get a lot done when it works hard
 No task is too tough for this board
 The board believes it can be very productive
 The board expects to have a lot of influence

Cultural intelligence questions

I am conscious of the cultural knowledge I use when interacting with people of different cultural backgrounds
 I adjust my cultural knowledge as I interact with people from a culture that is unfamiliar to me
 I am conscious of the cultural knowledge I apply to cross-cultural interactions
 I check the accuracy of my cultural knowledge as I interact with people from different cultures
 I enjoy interacting with people from different cultures
 I am confident that I can socialize with locals in a culture that is new to me
 I vary the rate of my speech when a cross-cultural situation requires it
 I am sure I can deal with the stresses of adjusting to a culture that is new to me
 I enjoy living in cultures that are unfamiliar to me
 I am confident that I can grow accustomed to the shopping conditions in a different culture
 I change my verbal behavior (for example, accent, tone) when a cross-cultural interaction requires it
 I change my non-verbal behavior when a cross-cultural interaction requires it
 I use pauses and silence differently to suit different cross-cultural situations
 I alter my facial expressions when a cross-cultural interaction requires it

aspects essentially measure the impact that external factors (namely, Sabanes-Oxley and other regulatory requirements) as well as internal factors of corporate governance standards have on directors. These TTP aspects were captured through a board task performance audit scale developed by Bateman *et al* (2002) with questions clustered around six core themes. Because half of these themes were captured in the team dynamic measure (described above), we selected those items that directly reflected task performance and were not related to TIQ – skill, innovation and compliance quality. An EFA was performed as described above, and only one of the six items representing the skill factor was removed. The resulting Cronbach's $\alpha = 0.92$ reflects the remaining items for TTP.

TP is a measure of the team's assessment of their capability spanning many domains (Guzzo *et al*, 1993) and was captured with a scale created by Guzzo *et al*, (1993) and adapted by Collins and Parker (2010), made up of eight questions employing a 5-point Likert scale (Guzzo *et al*, 1993; Collins and Parker, 2010). We used all items in the validated scale. The TP Cronbach $\alpha = 0.92$. The scale is presented in Table 3.

Firm-level outcome

Profitability Performance was the selected firm-level outcome measure. It was operationalized by comparing the participant organization's profit margin (as defined by net income divided by total revenues) with the average of the size-adjusted comparable industry profit margin index. The size adjustment was based on three size categories: revenues of under US\$5 million, between \$5 million and \$50 million, and over \$50 million. The company's published financial statements as well as rating agencies, namely, Hoovers, S&P and Mergent, were sourced both to collect information on the participant's organization and to establish the average level of profitability of all organizations in a given industry group and revenue size. This relative

measure allowed us to determine whether the profitability of the participant's company over- or under-performed the industry average and the magnitude of that relative performance.

Control variables

We control for several factors, including industry category, company size as measured by employee count, and the proportion of inside versus outside directors on the board. Because we used an industry- and size-adjusted calculation for profitability performance, we did not have an additional control for industry and firm size. There is an argument to include the total number of employees as a measure of size in a study that aims to predict firm financial performance (Zajac and Westphal, 1996; Finkelstein and Boyd, 1998). In addition, there is precedent for considering the size of the board when predicting firm performance (Yermack, 1996; Dalton *et al*, 1998; Eisenberg *et al*, 1998). Recent studies have explored how the proportion of executive and independent directors and board composition impact firm performance (Wagner *et al*, 1998; Finegold *et al*, 2007).

Instrument development

We developed a survey using items from existing and validated scales to gather information for our analysis. Given the limited potential target participants (board directors of public and private for-profit organizations) and their disinclination to participate in surveys (Wagner *et al* 1998), we did not run a pilot study so as not to exhaust the limited number of potential participants. In addition, we used validated scales and did not introduce any original survey questions. Table 1 provides details on the sources of information and scales used to operationalize each construct in our research.

Data collection and sample demographics

An electronic-based survey was used to reach potential participants. Invitations were e-mailed

to target participants, comprising board members of randomly selected public and private for-profit organizations in the United States, of all sizes and industry types. Of the nearly 13 000 confirmed receipts of the survey questionnaire e-mails, 422 recipients completed the questionnaire, yielding a 3.5 per cent response rate. Rates this low are not uncommon among samples including top management and, in our case, board members (Stimpert, 1992), as these respondents are often overburdened, time-pressed and generally unwilling to share information about themselves or their boards. For each respondent, additional information was collected from secondary data

sources. Full complements of primary and secondary data were collected for 182 participants (1.42 per cent of total sample, and 43 per cent of respondents). Tables 4 and 5 summarize the demographic information for the participating organizations as well as director demographic profiles.

The data demonstrate appropriate levels of diversity, gender and representation of the industry as a whole. We performed an ANOVA test to determine whether any of the demographic characteristics of the respondents or timing of survey completion (early versus late respondents) had a significant impact on any of the variables. We found that there was a significant

Table 4: Summary of company profile information

<i>Area</i>	<i>Profile</i>
Total participants	182 directors
Total companies	166 unique organizations (due to multiple same-company respondents)
Percentage of public	70 per cent
Average revenue size in dollars	\$2.2 billion, ranging from \$0.2 to \$95 billion
Average number of directors	8, ranging from 2 to 20
Average number of inside directors	1, ranging from 0 to 10, 70 per cent of boards had at least 20 per cent non-independent directors
Industries represented	Professional services 25 per cent; transportation/extraction/construction 21 per cent; manufacturing 13 per cent; wholesale/retail 13 per cent; software/technology 11 per cent; health care/pharmaceuticals 9 per cent; financial services/insurance/REIT 8 per cent.

Table 5: Summary of director profile information

<i>Area</i>	<i>Profile</i>
Average age	62, ranging from 40 to 86
Gender	14 per cent women
Average number of boards served	4.9 boards, ranging from 1 to 25
Average board tenure	12.6 years, ranging from less than 1 year to 45 years
Profile of current position	CEO 64 per cent; direct report to CEO 30 per cent; retired/advisors 6 per cent
Highest level of education	Master's degree 52 per cent; bachelor's degree 37 per cent; doctorate 10 per cent; no degree 1 per cent
Current board role	Independent director 72 per cent; independent chairman 13 per cent; CEO/chairman

relationship between board role and profitability performance, but no other characteristic or survey completion timing impacts were significant. As we control for board role, we are not concerned about this relationship.

RESEARCH METHOD

Measurement model

We used validated scales in a different context than the original use, and we performed an EFA and a confirmatory factor analysis on the observed variables that should theoretically comprise latent constructs, with both analyses yielding passing levels of model fit, reliability and validity (CMIN/DF = 1.94, CFI = 0.89, NFI = 0.79, RMSEA = 0.07, PCLOSE = 0.000, Standardized RMR = 0.086, $\chi^2 = 1170.9$, Degrees of freedom = 603). Normality of the composite variables for each of the constructs (calculated using factor scores from the measurement model in AMOS) passed tests for skewness and kurtosis, but the profitability performance score was slightly skewed (2.20) and exhibited moderate kurtosis (4.49). We believe that these low levels are not problematic in our analysis. In addressing common method bias, we use multiple sources of data for our model, therefore it is less likely that common method bias will impact our results.

Structural model

We tested our hypotheses using structural equation modeling employing IBM SPSS and AMOS software version 20. We tested the hypothesized model and then eliminated non-significant relationships in order to achieve adequate model fit. We appropriately co-varied the residual errors for TP and TTP (Bateman *et al*, 2002; Hare, 2003; Kenny, 2003; Collins and Parker, 2010). Thus, we were able to account for their statistical correlation, without implying theoretical causation. We employed two approaches to test mediation: first, we took the Baron and Kenny (1986) approach in which we tested changes to the direct effect

after adding the mediating variable; second, we conducted bootstrapping using 2000 bias-corrected resamples. Using this second approach allowed us to determine the strength and significance of the standardized indirect effect of the mediated relationships (Baron and Kenny, 1986; Preacher and Hayes, 2004). To best understand a surprising relationship, we ran a multiple regression analysis between the first-order factors of TTP and profitability performance, and found that the quality factor, representing the area of compliance, had a dominative negative impact, outweighing the positive impact of skills and innovation. Therefore, we consider TTP to be almost exclusively reflective of the team's attention to compliance quality. The means, standard deviations and correlations of variables are reported in Table 6. We find that board member characteristics are strong antecedents to board-level outcomes, which are significantly related to firm performance.

Overall, we had a stronger than typical predictive model of corporate profitability ($R^2 = 0.20$) exceeding the most recent prevalent R^2 (ranging from 0.07 to 0.16) of other recent academic works using profitability as a dependent variable (Ali Shah, 2009; Gill *et al*, 2010; Gill and Obradovich, 2012). In addition, we observed fairly strong Squared Multiple Correlations (R^2) for TTP (0.70) and TP (0.44), presented in Table 7.

We had excellent model fit (CMIN/DF = 1.29, CFI = 0.988, NFI = 0.949, RMSEA = 0.04, PCLOSE = 0.636, Standardized RMR = 0.0571, $\chi^2 = 32.21$, Degrees of freedom = 25). In terms of the validity and reliability of our latent constructs, we found no concerns (that is, AVE > 0.50, CR > 0.70, MSV < AVE and $\sqrt{\text{AVE}} > \text{inter-construct correlations}$).

RESULTS

The results of our analyses are presented in both Figure 2 and Table 8. These two representations provide a summary of our findings for each hypothesis tested.

Table 6: Mean, standard deviation and correlation coefficients

	<i>Mean</i>	<i>Standard deviation</i>	<i>PC</i>	<i>Cultural intelligence</i>	<i>TIQ</i>	<i>SC</i>	<i>Potency</i>	<i>Team effectiveness</i>	<i>Profitability performance</i>
PC	-0.004	0.533	0.231	—	—	—	—	—	—
Cultural Intelligence	-0.025	0.681	0.146	0.93	—	—	—	—	—
TIQ	3.43	0.367	0.129	0.234	0.93	—	—	—	—
SC	-0.002	1.026	0.231	-0.085	0.004	1.0	—	—	—
Potency	0.011	0.578	0.086	0.155	0.664	0.003	0.91	—	—
Team Effectiveness	2.308	0.323	0.128	0.376	0.817	-0.014	0.822	0.92	—
Profitability Performance	13.364	0.071	0.202	-0.114	0.09	0.229	0.069	-0.066	1.0

Diagonal is Cronbach's α value.

Table 7: Squared multiple correlations results

<i>Squared multiple correlations</i>	<i>Estimate</i>
Team interaction	0.064
Potency	0.440
Team effectiveness	0.703
Corporate profitability	0.204

Of the 13 hypotheses tested in our model, 11 were supported. As for predicting the dependent variable of profitability performance, all hypotheses directly and indirectly related to profitability performance were statistically significant and positive, other than TTP (compliance-driven), which had a strong negative impact.

DISCUSSION

Overall, our model supports the F&M (1999) four-stage model, showing that, in fact, director characteristics accentuated by a healthy boardroom dynamic will produce better board-level outcomes, which in turn have an impact on firm-level outcomes.

Antecedents to board performance

PC and SC are supported in the model and have a direct and statistically significant impact on profitability performance. These attributes are aligned with the economic-based resource dependence theory. It is clear

that the knowledge and experience a director brings to the boardroom, as well as their network, are instrumental in accessing and utilizing resources in a manner that generates economic value. For this reason, we recommend that in the recruiting process nominating committees screen director candidates carefully for their industry, functional and leadership experience, and attempt to recruit directors who have a robust network of professional relationships. However, we see that PC and SC are not sufficient antecedents for full participation in the boardroom. CQ is important and critical in producing effective team interaction (0.22, $P < 0.01$), facilitating task performance (0.20, $P < 0.01$) and generating TP (0.15, $P < 0.01$) – all critical in predicting relative profitability performance. We believe that higher levels of CQ are associated with higher levels of TIQ, TTP, TP and ultimately profitability because of the ability of directors to perform effectively in the team setting. In addition, our prior research has shown that board recruiting practices can be linked to the quality of corporate governance, the success of the director candidate in assimilating in the culture unique to each boardroom, director satisfaction and director tenure (Charas, 2012). Executive recruiters assisting boards should be screening for this vital behavioral quality in serving their corporate clients, and board candidates seeking new appointments should cultivate CQ skills.

Table 8: Presentation of hypotheses, evidence and results

<i>Hypotheses</i>	<i>Evidence</i>	<i>Results</i>
Hypothesis 1a: Higher levels of professional capital (PC) increase profitability.	0.17** Direct	Supported
Hypothesis 1b: Higher levels of social capital (SC) increase profitability.	0.18*** Direct	Supported
Hypothesis 2: Higher levels of professional capital (PC) increase team interaction quality (TIQ).	0.10* Direct	Supported
Hypothesis 3a: Higher levels of cultural intelligence quotient (CQ) increase team interaction quality (TIQ).	0.22*** Direct	Supported
Hypothesis 3b: Higher levels of cultural intelligence quotient (CQ) increase team task performance (TTP).	0.20*** Direct	Supported
Hypothesis 4a: Team interaction quality (TIQ) mediates the relationship between cultural intelligence quotient (CQ) and team potency (TP).	-0.15*** Mediated	Supported
Hypothesis 4b: Team interaction quality (TIQ) mediates the relationship between professional capital (PC) and team potency (TP).	-0.02 ns Direct	Not supported
Hypothesis 5a: Team interaction quality (TIQ) mediates the relationship between cultural intelligence quotient (CQ) and team task performance (TTP).	.20*** Mediator	Supported
Hypothesis 5b: Team interaction quality (TIQ) mediates the relationship between professional capital (PC) and team task performance (TTP).	0.06 ns Direct	Not supported
Hypothesis 6: Team interaction quality (TIQ) mediates the relationship between cultural intelligence quotient (CQ) and profitability.	-0.13*** Mediated	Supported
Hypothesis 7: Team potency (TP) mediates the relationship between team interaction quality (TIQ) and profitability.	0.38*** Mediator	Supported
Hypothesis 8a: Team task performance (TTP) mediates the relationship between team interaction quality (TIQ) and profitability.	0.42*** Mediator	Supported
Hypothesis 8b: Team task performance (TTP) mediates the relationship between cultural intelligence quotient (CQ) and profitability.	0.15*** Mediated	Supported

*** $P < 0.01$; ** $P < 0.05$; * $P < 0.10$; ns = not statistically significant.

Team dynamics

TIQ appears to be the ‘intervening process’ identified by F&M (1999), however not in the manner we expected. It does not translate the director characteristics and individual behaviors to board-level outcomes of TTP and TP, but it is critical in the model in predicting TTP and TP. TIQ is a significant and powerful antecedent to board-level outcomes. F&M (1999) identified that there is an ‘intervening process’ at the board level that drives board- and firm-

level outcomes (F&M, 1999). Others have referred to this as the board’s dynamic (Leblanc and Gillies, 2003; Letendre, 2004; Huse *et al*, 2005; Leblanc and Schwartz, 2007; Huse *et al*, 2011). TIQ is the heart of our model, and the critical ‘intervening process’ that determines the success or failure of the board as a team, and therefore their ability to generate measurable profitability enhancement, demonstrated by the relationship TIQ has with TTP (0.77, $P < 0.01$), TP (0.66, $P < 0.01$) and directly

with profitability (0.42, $P < 0.01$). Achieving a high level of board team dynamics reduces information asymmetry as demonstrated by Greenwald and Stiglitz (1994): the reduction of information asymmetry between those who 'make decisions (agents) and the theoretical beneficiaries of those decisions (principals)' is a way to optimize value creation (Greenwald and Stiglitz, 1994). Boards are primarily 'decision-making groups composed mostly of outsiders who bring substantial independence at the price of lower inside knowledge of the firm and its strategies' (Minichilli *et al.*, 2012). According to the most recent survey of board directors conducted by Cloyd *et al.* (2012), 97.8 per cent of boards are engaged in an evaluation process; however, the focus of the evaluation is on individual directors, and not the board as a team (Cloyd *et al.*, 2012). We recommend that boards replace the individual director evaluation, adopting a team-based assessment (like the TLI) – to measure the effectiveness of the board's dynamic and the resulting impact on profitability performance.

Team task performance

TTP is an interesting mediator as it plays an important clarifying role between TIQ and profitability performance. When we measured the direct relationship between TIQ and profitability performance, we found that it was weak and not significant ($\beta = 0.06$). This is because TIQ has both positive and negative impacts on profitability performance that are 'cancelling' each other out (hence the low β). However, when we add TTP as the mediator, we find that TTP is channeling the negative impact TIQ has on profitability performance (indirect $\beta = -0.33$, $P < 0.01$), which then allows the positive effect to be manifested in the direct path ($\beta = 0.42$, $P < 0.01$). Thus, the mediating role of TTP, although not as expected, provides greater clarification on the eustress and distress effects TIQ has on profitability performance. The attention and concern with board policy and government regulations compliance,

enhanced by TIQ, is diminishing the positive impact that team dynamic and TP have on the board's ability to generate positive profitability results. Given the ever-increasing complexity in the governance compliance arena (Sarbanes-Oxley in 2002, Dodd-Frank in 2010), 50 per cent of directors report that they spend at least 60 per cent more time on compliance issues than they did in the previous year (Cloyd *et al.* 2012). It is not surprising that devoting so much time and attention to regulation compliance detracts from directors' ability to spend meaningful time on value-creating activities such as strategy development, succession planning, understanding the business operations better, developing human capital and risk management (Cloyd *et al.* 2012; Charas and Perelli, 2013). Focusing on compliance issues required by legislation at the expense of other board activities and the negative impact on firm performance has been highlighted in past research (Romano, 2005a, 2005b; Shadab, 2008). In addition to the negative impact compliance has on profitability performance, qualified professionals who once welcomed the opportunity to join boards no longer accept board positions as they are loathe to take on the additional accountability of regulatory compliance as well as the reputational risk of being associated with a non-complying board (Lorsch, 2012; Spencer Stewart, 2010). Our recommendation is two-fold: boards should consider improving the dynamic of the boardroom to make their limited time together more effective, freeing up time to address strategic (less administratively oriented) and value-creating topics. In addition, boards may want to consider availing themselves of advisors well versed in compliance issues, and charging that individual or (committee) with the overall responsibility for board compliance.

Team potency

TP is a strong driver of profitability in our model as the 'collective beliefs about [the team's] likely effectiveness ... is related to actual effectiveness as both a cause and a consequence'

(Guzzo *et al*, 1993). Our model demonstrates that TP is a strong predictor of profitability (0.44, $P < 0.01$). The model also demonstrates the strong relationship between TIQ and TP (0.66, $P < 0.01$), further indicating the importance of a healthy dynamic in the boardroom. As expressed by Guzzo *et al* (1993), the way to improve potency is to energize and inspire others, enlist commitments and set high goals, and address unproductive conflict among team members. It is clear that team dynamics is the critical ‘intervening process’ that drives not only TTP, but TP as well, and why it is so vital in high-performing teams. On the basis of the results of our analysis, our single model could easily capture two distinct theoretical frameworks: the economic-based model that only considers director PC and SC as antecedents to profitability has validity; and a second behavioral model that begins with TIQ and shows how critical TIQ is in generating TTP and TP, which in turn are strong predictors of relative profitability. The combined theoretical frameworks have greater predictive value.

LIMITATIONS AND IMPLICATIONS FOR FUTURE RESEARCH

The model we hypothesized and presented is characterized by several limitations. First, we have approached the problem from a multi-theoretical framework, relying on economic, behavioral and team theory, and we cannot be certain that this was the appropriate framework from which to consider the problem and interpret the model. Second, although we have tried to show a statistically significant relationship between board-level outcomes and profitability performance, there are many factors that could explain this relationship beyond the constructs selected for this model. Third, although our model has strong predictive significance, we based our results on a relatively small sample size of 182 directors. However, given that recent research in this area is based on published

sources of data, and our research is based on primary data, we believe that our participant size is supportable. In addition, to fully understand the dynamics of the team, multiple perspectives of the same team needed to be collected. Our work is based on one perspective of team performance on the board. Lastly, we selected relative profitability of the firm – compared with same-sized organizations in comparable industries – as the measure of performance. There are many other measures that might be better indicators of firm performance. Future research should take these limitations into consideration when designing further research protocols. In addition, to isolate the impact of team dynamic, we recommend that experimental research be performed by working with boards to enhance their dynamic and measuring the impact of improved dynamic on board- and firm-level outcomes over time.

CONCLUSIONS

Our research has clearly demonstrated that there is a relationship between director characteristics and their impact on corporate profitability, as a departure from the prevalent individual-focused economic-based theories. Our model shows that in fact directors do have a statistically significant impact on profitability performance, but it is a small impact, explaining less than 0.5 per cent of performance. We have demonstrated that the behaviors of directors – successfully exchanging information, developing trust and a shared mindset, having collective belief in their ability to accomplish their goals – are in fact the intervening processes introduced by F&M (1999) and thus critical to corporate success. We have shown that this team dynamic – heretofore never measured – is the antecedent to economic value creation, and that the impact of ‘boards as teams’ has an 800 per cent or eight times (8X) greater predictive impact on profitability performance, as the model suggests that up to 4 per cent of profitability performance is explained by integrated actions at the team level. By considering the board as a team, we

have a basis for understanding how economic value can be created through reducing information asymmetry, improving directors' ability to appropriately respond to the cultural/social norms of the team through the expression of CQ and develop TP. Our hope is that future research will build on our team-behavioral approach and further explore how seamlessly integrating board and top management team dynamics and strategic initiatives could be a powerful antecedent to firm profitability.

NOTES

- 1 Heidrick and Struggles (2010) list long-term strategy development, identifying future business threats and opportunities and succession planning as the top three accountabilities for boards based on their recent survey
- 2 Items can be obtained by contacting Dr Lingham directly.

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